

**REMARKS**

Claims 1-7 are pending in this application. Claim 8 is withdrawn from consideration as being directed to a non-elected invention.

**I. Rejection of Claims under 35 U.S.C. §103**

Claims 1-7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Sotomura (US 2003/0091889) in view of Cooper (USPN 5,316,990).

The Office Action contends that Sotomura teaches a method of making a composition electrode for use as a fuel cell where the composite electrode contains an electrochemical catalyst A and an electrochemical catalyst B, wherein the electrochemical catalyst A and/or B can be deposited by an electrochemical method such as a potential sweep method (paragraph [0054] of Sotomura). However, the Office Action admits that Sotomura does NOT teach providing a potential higher than 1.3V, or 1.6V or less with reference to a standard hydrogen electrode. Cooper is relied upon as teaching a catalyst material derived from precious metal-containing macrocyclic compound (metal complex) and that the catalyst is activated by sweeping an applied potential between 0.05 and 2.0 V with reference to a dynamic hydrogen electrode. The Office Action maintains that a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art."

The rejection respectfully traversed.

As noted in the Office Action, Cooper discloses that the catalyst is "**activated**" by sweeping an applied potential between 0.05 and 2.0 V. However, conducting the potential sweep when using metal materials as catalysts, as disclosed in Cooper, is done in order to **remove** surface oxide coatings or organic coatings (see col. 4, lines 33 through 35 of Cooper which describes giving the precursor material containing precious metal **in zero oxidation state**).

Further, col. 5, lines 21 through 30 of Cooper describes preparing an electrode bearing the macrocyclic precursor material *in the conventional matter*. This generally involves dispersing the material in a suspension of hydrophobic material, coating a substrate such as PTFE wet-proofed graphite paper or carbon cloth with the dispersion and *sintering* the coated substrate, in either an oxygen-containing atmosphere such as air, or an inert atmosphere such as nitrogen.

No portion of Cooper discloses or suggests preparing the electrode by depositing a electrochemical catalyst by a potential sweep method, as disclosed in Sotomura. Therefore, a person of ordinary skill in the art would conduct the potential sweep disclosed in Cooper for the same purpose as that disclosed in Cooper, i.e., in order to *remove* surface oxide coatings or organic coatings.

In this regard, the complex material used by Sotomura does NOT have any coatings that need to be removed. Therefore, a person of ordinary skill in the art would NOT adopt the potential sweep disclosed in Cooper, which is performed in order to *remove* surface oxide coatings or organic coatings from the metal material, for the complex material disclosed in Sotomura, which does not have any coatings that need to be removed.

Without the introduction of any additional evidence on this record that establishes that a person of ordinary skill in the art would use sweeping an applied potential between 0.05 and 2.0 V, not for *removing* surface oxide coatings or organic coating from the metal material, as disclosed in Sotomura, but for depositing the electrochemical catalyst A and/or B of Sotomura, the only reasonable conclusion is that present rejection of the claims is based on improper hindsight. However, it is impermissible simply to engage in hindsight reconstruction of the claimed invention, using applicants' structure as a template and selecting elements from references to fill in the gaps. *In re Gorman*, 18 USPQ2d 1885 (Fed. Cir. 1991).


Therefore, independent claim 1 is patentable over Sotomura and Cooper, considered alone or in combination. Because claims 2-7 depend directly or indirectly from independent claim 1, they are patentable over Sotomura and Cooper for at least the reason(s) discussed above, as well as for the additional features they recite. Accordingly, the allowance of claims 1-7 is respectfully solicited.

## **II. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

  
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